Mental imagery and mood instability in patients with bipolar disorder

SUMMARY

Bipolar disorder is a severe, chronic mental health disorder. Treatment options are limited and are largely based on a biomedical model, with pharmacological approaches continuing to dominate. However, relapse rates remain high and ongoing mood instability between episodes and co-morbid anxiety complicate the impact of this condition. Several adjunctive psychosocial interventions, mostly psychoeducation (PE) and cognitive behavioural therapy (CBT), have been trialled, but treatment innovation remains pertinent as effects are limited, and the burden of illness is substantial. One promising new avenue to increase the effectiveness of CBT for patients with bipolar disorder explores the addition of an imagery focus to existing cognitive behavioural therapy. An added imagery focus has improved the effectiveness of CBT in many other mental health problems, such as trauma, anxiety, and obsessive-compulsive disorder. To explore how mental imagery can enhance current CBT in patients with bipolar disorder, an additional integrated psychological model is needed to explain mood instability and anxiety. In recent years Holmes and colleagues proposed a cognitive model, the Emotional amplifier model, to explain how mental imagery amplifies anxiety, mania, and depression in patients with bipolar disorder, increasing associated beliefs, goals, and action-likelihood. However, more research is needed into the relationship between mental imagery, anxiety, and mood instability. This thesis aims to contribute to our understanding of mood instability in bipolar disorder and explore the effectiveness of an additional imagery focus on CBT.

Chapter 1 provided a general introduction to the topic and aim of this thesis. This Chapter introduced bipolar disorder, its characteristics and current practice and highlighted the need for a new integrated model of bipolar disorder, giving opportunities for treatment innovations. The cognitive Emotional amplifier model is introduced as a promising integrated model with options for treatment innovation. Furthermore, this Chapter provided an outline of the thesis and information on the research questions.

In Chapter 2 we elaborated on the assessment of the different aspects of emotional imagery, i.e. Frequency of imagery, Quality of imagery, Appraisals of imagery, self-perceived Effect on emotion, and Effect on behaviour. We stressed the need for measuring these distinct aspects of mental imagery as they might help increase our understanding of the special role mental imagery might play in bipolar disorder and inform much-needed treatment innovation. We adapted the Imagery Interview by Hackmann, a frequently used measure of imagery in mental disorders, and constructed a new survey, the DImS. The DImS was validated using a student sample, and concluded that this survey is a feasible, reliable tool for measuring mental imagery. Moreover, the DImS was able to detect associations between Frequency of imagery,

Quality of imagery and Appraisals of imagery on one hand, and Effect on emotion and Effect on behaviour on the other hand.

Chapter 3 described a large cross-sectional study using the DImS to explore Frequency of imagery, Quality of imagery, Appraisals of imagery, and Effect on emotion and behaviour by comparing different groups. Mental imagery in patients with bipolar disorder was compared to groups closely linked by either mood or imagery proneness and compared to a healthy control group. Quality of imagery in mood disorders (both in groups with bipolar and unipolar depression) was found to be similar to that found in imagery prone students. Only negative metacognitions distinguish mood disorders from imagery prone and healthy students. Moreover, mental imagery appeared to act as an emotional amplifier in all groups, especially in the bipolar group with current mania and depression symptoms. Most interestingly, mental imagery quality and appraisals had a particularly high association with effect on behaviour, especially in the bipolar group with current mania and depression symptoms. Patients with bipolar disorder who were currently euthymic were indistinguishable from imagery prone healthy participants.

Chapter 4 used temporal network modelling techniques to study the momentary and time-lagged connections between mental imagery, anxiety, mania, and depression. This temporal network model ties in with modern conceptualisations of mental disorders were symptoms or clusters of symptoms interact with each other, as opposed to a traditional bio-medical classifying approach. We used these modelling techniques to assess the temporal relationships between mental imagery, mood and anxiety as predicted by the Emotional amplifier model. Both mental imagery and anxiety appear to act as precursors to mood amplification. This finding offers support for the Emotional amplifier model. This study contained two groups of participants, a group following psychoeducation and a group receiving new imagery focused cognitive therapy (ImCT). We found that in the ImCT group, who received an imagery focused treatment, imagery was no longer driving mood changes. This study suggested that this research approach is not only feasible when studying mental imagery in bipolar disorder but also constructive and informative.

Chapter 5 compared a new Imagery-focused cognitive therapy to group psychoeducation in a randomised controlled study, using daily, weekly and pre-post and follow-up measurements during four weeks of baseline, intervention phase and 16-weeks follow-up. In both groups, mood instability and mania, depression and anxiety significantly reduced at follow-up compared to baseline. In addition, we found ImCT was more effective at reducing symptoms of anxiety, depression, and hopelessness than psychoeducation.

Chapter 6 described a case study based on the experience of treating several participants who experienced mania or hypomanic symptoms delivering ImCT in the trial described in chapter 4 and described the mental imagery techniques we found helpful. We included the daily and weekly measures used to monitor his progress and calculated meaningful differences using a single case series design. ImCT was feasible in patients with mania, offering a much needed psychosocial treatment addition to pharmacotherapy for mania symptoms. Furthermore, this study suggested that research studies should include patients with mania symptoms.

Chapter 7 provides a summary of the main results and a reflection on the theoretical and clinical implications. We found support for the Emotional amplifier model. We also argued for a new way to conceptualise bipolar disorder. Mood instability, mania and depression are likely symptoms on a continuum, or spectrum, influenced by anxiety and mental imagery, with possibly a biological pre-determined form of decompensating (i.e. the bipolar expression). This new way of conceptualising bipolar disorder opens new avenues for treatment innovations, in particular updating psychoeducation and cognitive behavioural therapy could inform scientists planning further research, which should although difficult, aim to include more patients who are manic or severely depressed.